DIVIDED PRESSURE VESSEL APPARATUS FOR CARBON DIOXIDE BASED SYSTEMS AND METHODS OF USING SAME

Abstract of the Disclosure

A method of utilizing a divided pressure vessel in a processing system employing a carbon dioxide based solvent includes transferring a first carbon dioxide based treating solution from a first liquid chamber in a divided pressure vessel having a plurality of liquid chambers to a processing vessel, returning the first treating solution from the processing vessel to the divided pressure vessel, transferring a second carbon dioxide based treating solution having a composition different from the first treating solution from a second liquid chamber in the divided pressure vessel to a processing vessel, and returning the second treating solution from the processing vessel to the divided pressure vessel. A divided pressure vessel may allow multiple solvent baths each having a different chemical composition to be stored and/or processed in a single pressure vessel while maintaining the different chemical compositions of the multiple solvent baths. Thus, such divided pressure vessels may provide the improved operational efficiency of a carbon dioxide based system having multiple solvent baths while decreasing the capital costs that may be associated with such systems.